

## ABSTRACT

A catalyst contains at least one group VIII element and at least molybdenum and/or tungsten, said elements being present at least in part in the catalyst in the dry state in the form of at least

t one heteropolyanion with formula  $M_xAB_6O_{24}H_6C_{(3-2x)}, tH_2O$ ;  $M_xAB_6O_{24}H_6C_{(4-2x)}, tH_2O$ ;  $M_xA_2B_{10}O_{38}H_4C_{(6-2x)}, tH_2O$ ;  $M_xA_2B_{10}O_{38}H_4C_{(8-2x)}, tH_2O$ ; or  $M_xA_2B_{10}O_{38}H_4C_{(7-2x)}, tH_2O$ , in which M is cobalt and/or nickel and/or iron and/or copper and/or zinc, A is one or two elements from group VIII of the periodic table, B is molybdenum and/or tungsten and C is an  $H^+$  ion and/or a  $(NR_1R_2R_3R_4)^+$  type ammonium ion, in which  $R_1, R_2, R_3$  and  $R_4$ , which may be identical or different, correspond either to a hydrogen atom or to an alkyl group and/or caesium and/or potassium and/or sodium, t is a number between 0 and 15 and x takes a value in the range 0 to 4 depending on the formula.